Service-Anleitung
Service Manual
Instructions de Service

CD 1010 RC

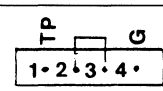
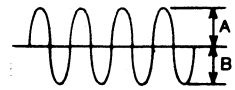
Technische Daten Meßwerte = typische Werte	**Technical data** Measured values = typical values	**Caractéristiques techniques** Valeurs mesurées = valeurs typiques	**Dati tecnici** Valori di misuri = valori tipici	CD 1010 RC
Frequenzbereich	**Frequency response**	**Courbe de réponse**	**Banda do Frequenza**	20–20 000 Hz ± 1 dB
Geräuschspannungsabstand	**Signal to noise ratio**	**Rapport signal/bruit**	**Rapporto segnale disturbo**	95 dB
Dynamikbereich	**Dynamic range**	**Dynamique**	**Dinamica**	92 dB
Übersprechdämpfung (1 kHz)	**Crosstalk (1 kHz)**	**Diaphonie (1 kHz)**	**Diafonia**	90 dB
Klirrfaktor (1 kHz)	**Harmonic distortion (1 kHz)**	**Distorsion harmonique (1 kHz)**	**Distorsione atmonica**	< 0,05 %
Gleichlaufschwankungen	**Wow and flutter**	**Tolérance de vites**	**Toleranza di velocità**	< ± 0,001 %
Ausgangsspannung	**Output voltage**	**Tension de sortie**	**Tensione di uscita**	2 V
Max. programmierbare Musiktitel	**Max. music title programming**	**Titres de musique au max. programmé**	**Programmazione di pezzi musicale**	20
D/A Wandler	**D/A Converter**	**D/A Convertisseur**	**Quantizzazione**	16 Bit
Abtastfrequenz	**Sampling frequency**	**Fréquence de pick-up**	**Frequenza di campionatura**	176,4 kHz
Abtastsystem	**Pick up**	**Pick up**	**Testina di lettura**	3-Strahl-Laser 3-beam optical pick up
Leistungsaufnahme	**Power consumption**	**Consommation**	**Potenza assorbita**	14,5 W
Netzspannung Model Europa	**Mains voltage** European model	**Voltage secteur** Modèle Europe	**Tensione di rete** modello Europa	230 V/50 Hz

Dual GmbH · Postfach 1144 · 7742 St. Georgen/Schwarzwald

921 637 1091

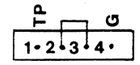
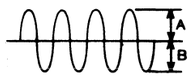
Copyright by Dual

Abgleichanleitung CD 1010

Signalquelle	Einstellung Gerät	Meßgeräteanschluß	Abgleichposition	Abgleichbemerkungen
1. Focus offset				
	Stop	DC Voltmeter an „FO“	VR 3	DC 0 V
2. Tracking offset				
	Stop	Osci an „TO“	VR 5	DC 0 V und Minimum Rauschen
3. VT				
	Stop	DC Voltmeter an „VT“	VR 7	DC 3,9 V
4. VCO				
		1. Frequ. Zähler an „TP“ CK 2. Stecker EFM-G kurzschließen 3. Kurzschluß trennen	VR 8	4,3218 MHz
5. TE Balance				
Phillips Test CD 5 A	1. Netz aus	1. am Stecker TP-G Pin 2 zu 3 kurzschließen 2. Osci an „TP“		
	2. Netz ein		VR 4	 A = B DC 0 V
	3. Kurzschluß trennen			
6. Tracking Gain				
Titel Nr. 1	Play/Pause	Millivoltmeter an „T 0“	VR 6	Maximum – 3 dB AC
7. Focus Gain				
Titel Nr. 1	Play	Millivoltmeter an „F 0“	VR 2	140 mV AC

EFM = 1,8 V SS
Nach Abgleich Punkt 1 und 2 noch einmal kontrollieren.
Alle Spannungen gegen Masse gemessen.

Tuning instructions for CD 1010

Signal source	Equipment setting	Connection of measuring instrument	Item to be tuned	Tuning remarks
1. Focus offset				
	Stop	DC voltmeter to "FO"	VR 3	DC 0 V
2. Tracking offset				
	Stop	Oscilloscope to "TO"	VR 5	DC 0 V and minimum of noise
3. VT				
	Stop	DC voltmeter to "VT"	VR 7	DC 3.9 V
4. VCO				
		1. Frequ. counter to "TP" CK 2. Short-circuit plug EFM-G 3. Remove short circuit	VR 8	4.3218 MHz
5. TE Balance				
Phillips Test CD 5 A	1. Power off	1. Short-circuit Pin 2 to 3 at plug TP-G 2. Oscilloscope to "TP"		
	2. Power on		VR 4	 DC 0 V A = B
	3. Remove short-circuit			
6. Tracking Gain				
Titel No. 1	Play/Pause	Millivoltmeter to "T 0"	VR 6	Maximum – 3 dB AC
7. Focus Gain				
Titel No. 2	Play	Millivoltmeter to "F 0"	VR 2	140 mV AC

EFM = 1.8 V SS
Please control point 1 and point 2 after balance again.
All voltages measured against earth.

MAIN P.C.B (Fig.1)

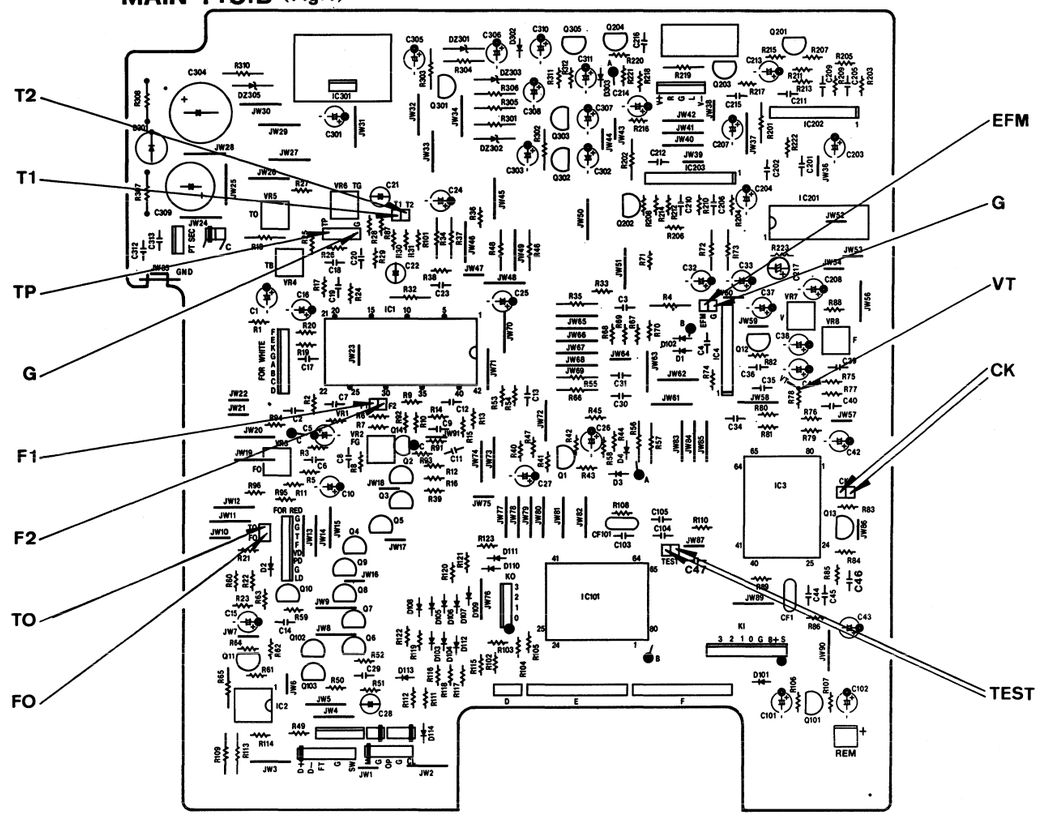
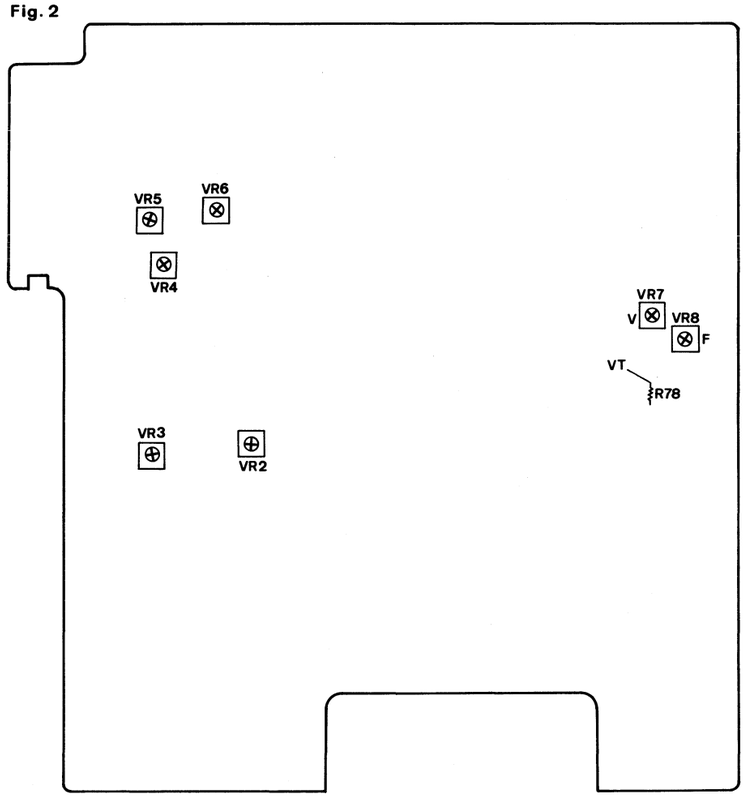
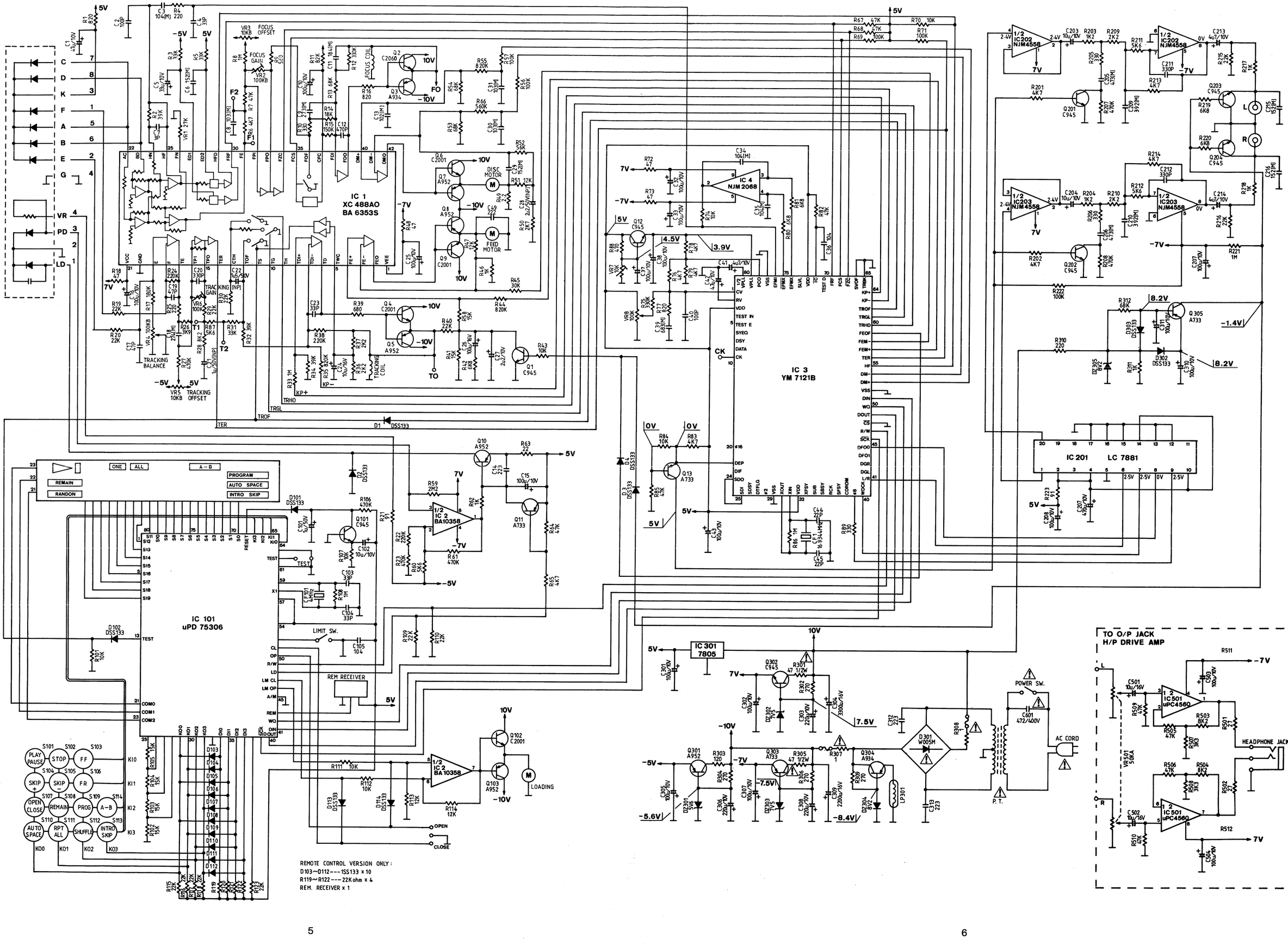
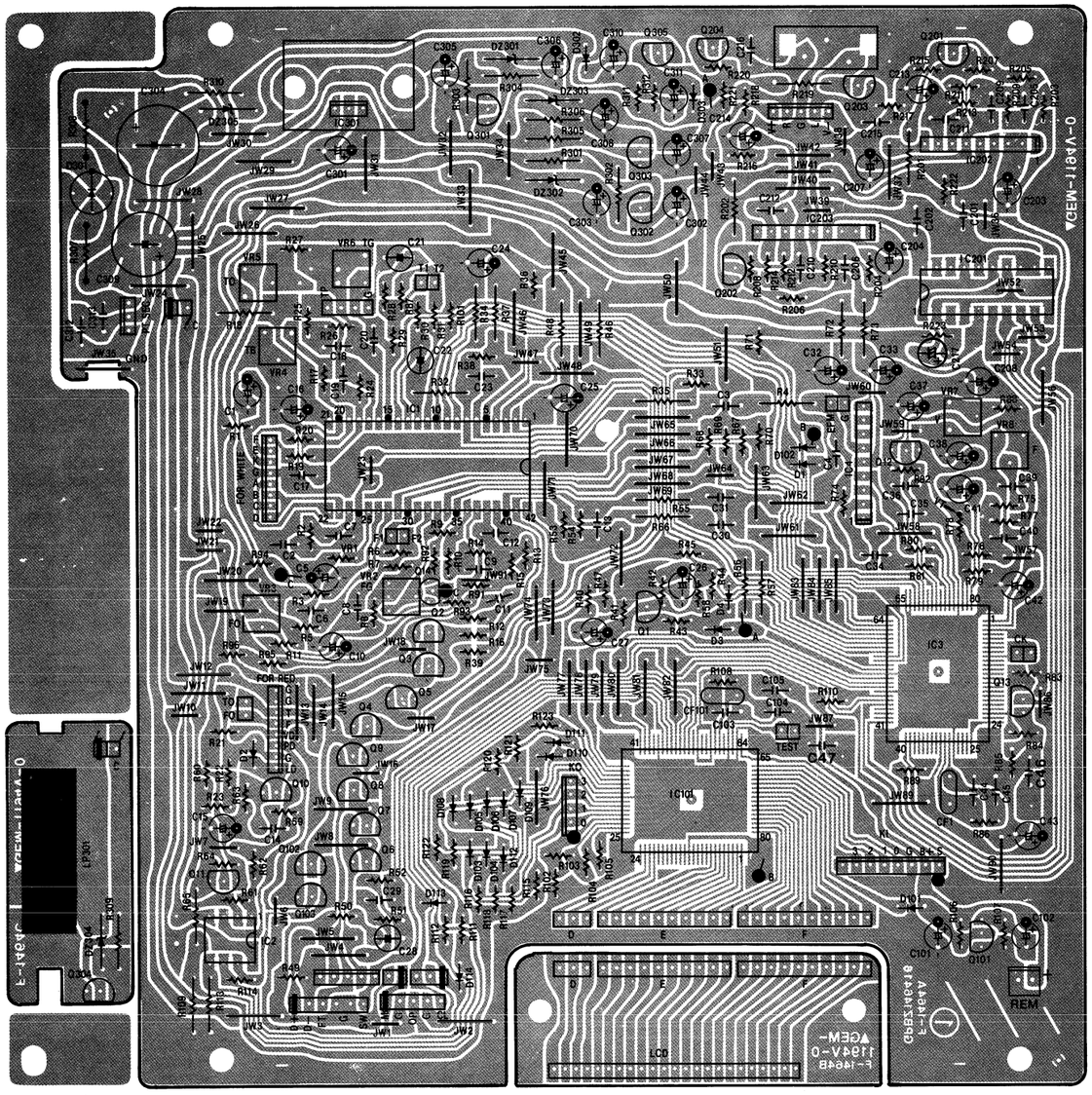


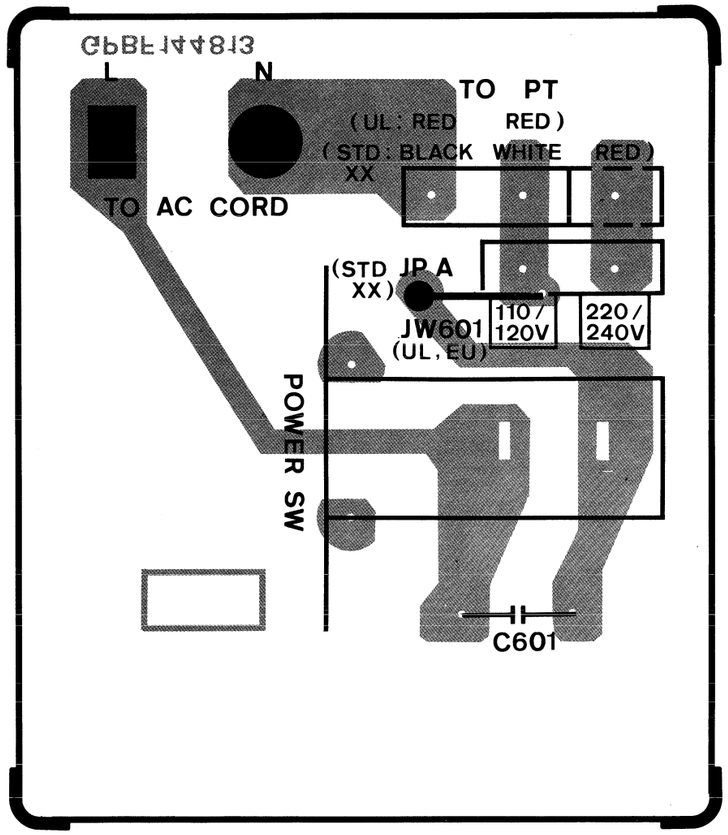
Fig. 2



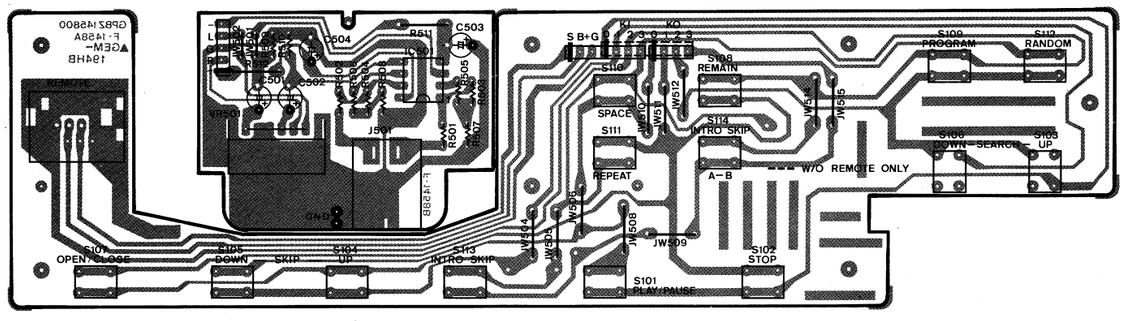

IC 1
XC 488AO
BA 6353S
IC 4
NJM 2068
IC 3
YM 7121B
IC 101
uPD 75306
IC 201
LC 7881
IC 301
7805
IC 2
BA10358
1/2 IC202 NJM4558
1/2 IC203 NJM4558
1/2 IC501 uPC4560
DISC MOTOR
FEED MOTOR
TRACKING BALANCE
TRACKING OFFSET
FOCUS OFFSET
FOCUS GAIN
TRACKING GAIN
FOCUS COIL
TRACKING COIL
LIMIT SW.
REM RECEIVER
LOADING
POWER SW.
AC CORD
HEADPHONE JACK
TO O/P JACK
H/P DRIVE AMP
REMOTE CONTROL VERSION ONLY :
D103~D112 ---- 1SS133 x 10
R119~R122 ---- 22K ohm x 4
REM. RECEIVER x 1

Grundplatte
Main P.C.B.

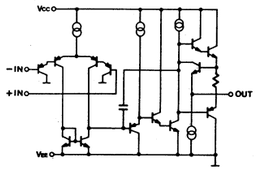


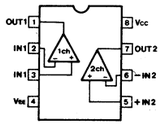


Volume-Platte
Volume-P.C.B.

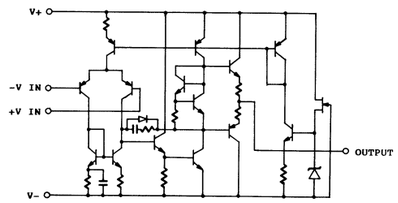


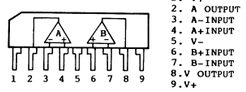
BA 10358F (APC)





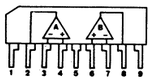
NJM 2068S (OP. Amp)





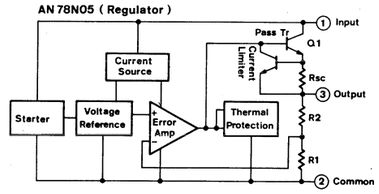
1. V+
2. A OUTPUT
3. A-INPUT
4. A+INPUT
5. V-
6. B+INPUT
7. B-INPUT
8. V OUTPUT
9. V+

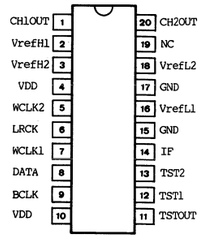
M4558S (ANALOG FILTER)



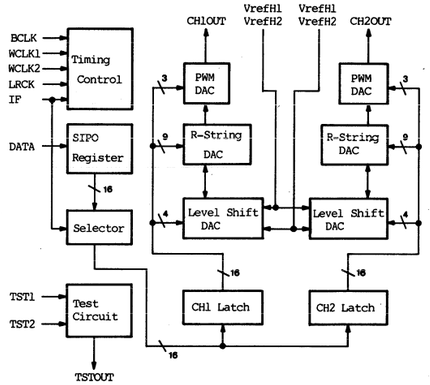
1 V+
2 A OUTPUT
3 A- INPUT
4 A+ INPUT
5 V-
6 B+ INPUT
7 B- INPUT
8 B OUTPUT
9 V+

AN 78N05 (Regulator)

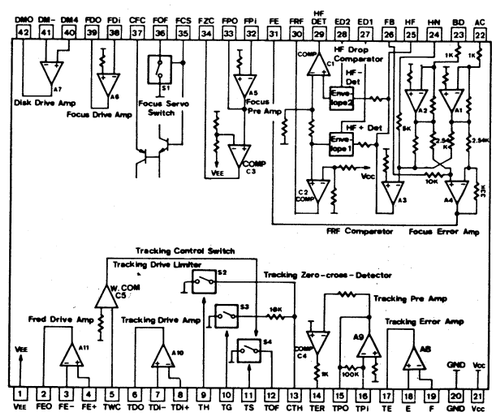




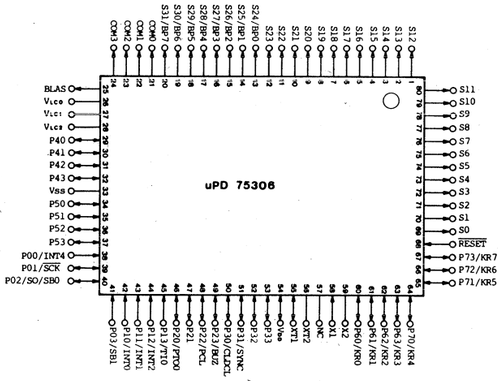
LC 7881 (D-A Converter)



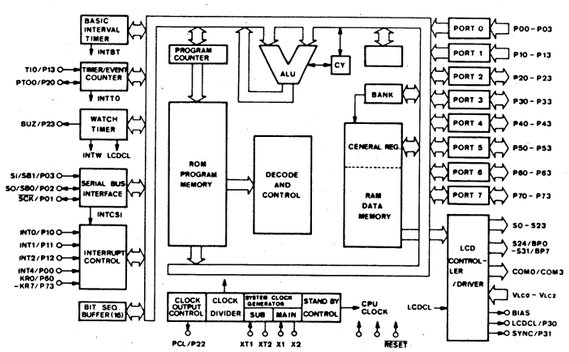
XC 488AO (Focus & Tracking Servo)



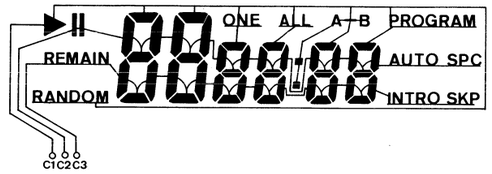
uPD 75306

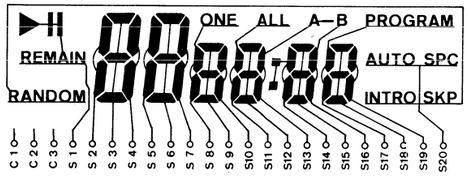


P00-03	: Port 0	S0-31	: Segment Output 0-31
P10-13	: Port 1	COM0-3	: Common Output 0-3
P20-23	: Port 2	Vlcd-2	: LDC Power Supply 0-2
P30-33	: Port 3	BLAS	: LCD Power Supply Bias Control
P40-43	: Port 4	LCDCL	: LCD Clock
P50-53	: Port 5	SYNC	: LCD Synchronization
P60-63	: Port 6	T10	: Timer Input 0
P70-73	: Port 7	PTO0	: Programmable Timer Output 0
BP0-7	: Bit Port	BUZ	: Buzzer Clock
LR0-7	: Key Return	PCL	: Programmable Clock
SCK	: Serial Clock	INT0,1,4	: External Vectored Interrupt 0,1,4
SI	: Serial Input	INT2	: External Test Interrupt 2
SO	: Serial Output	XI,2	: Main-system Clock Oscilation 1,2
SB0,1	: Serial Bus 0,1	XT1,2	: Subsystem Clock Oscilation 1,2
RESET	: Reset	NC	: Non-connection

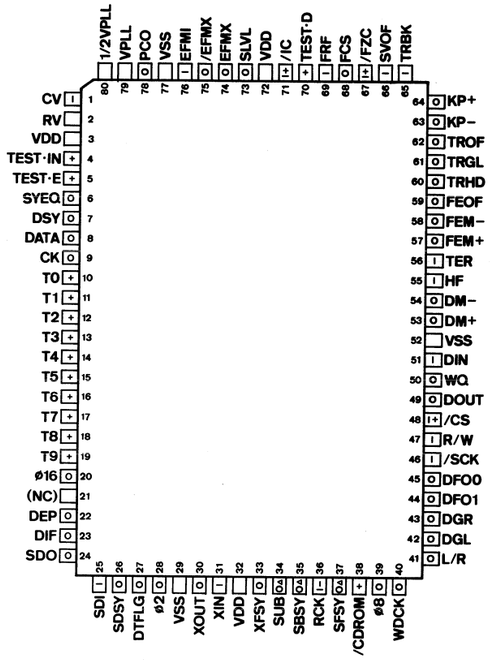


LCD DISPLAY

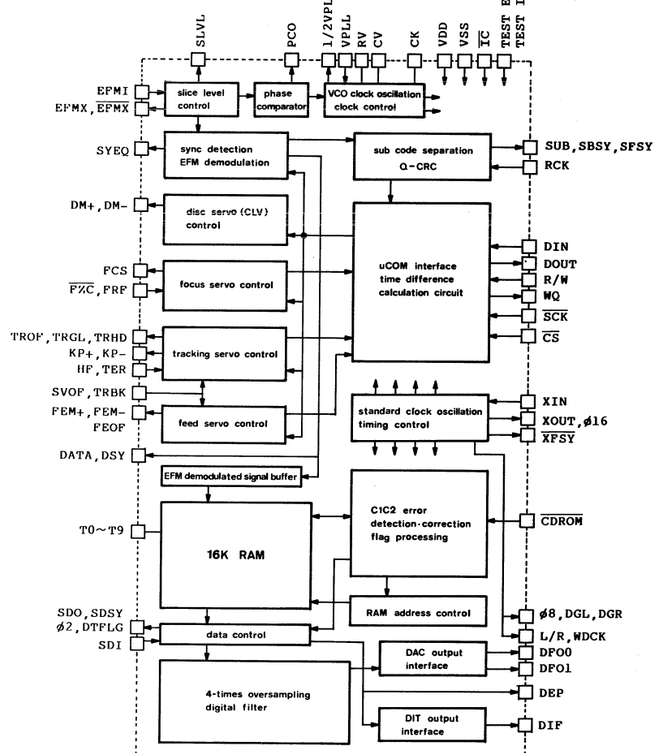




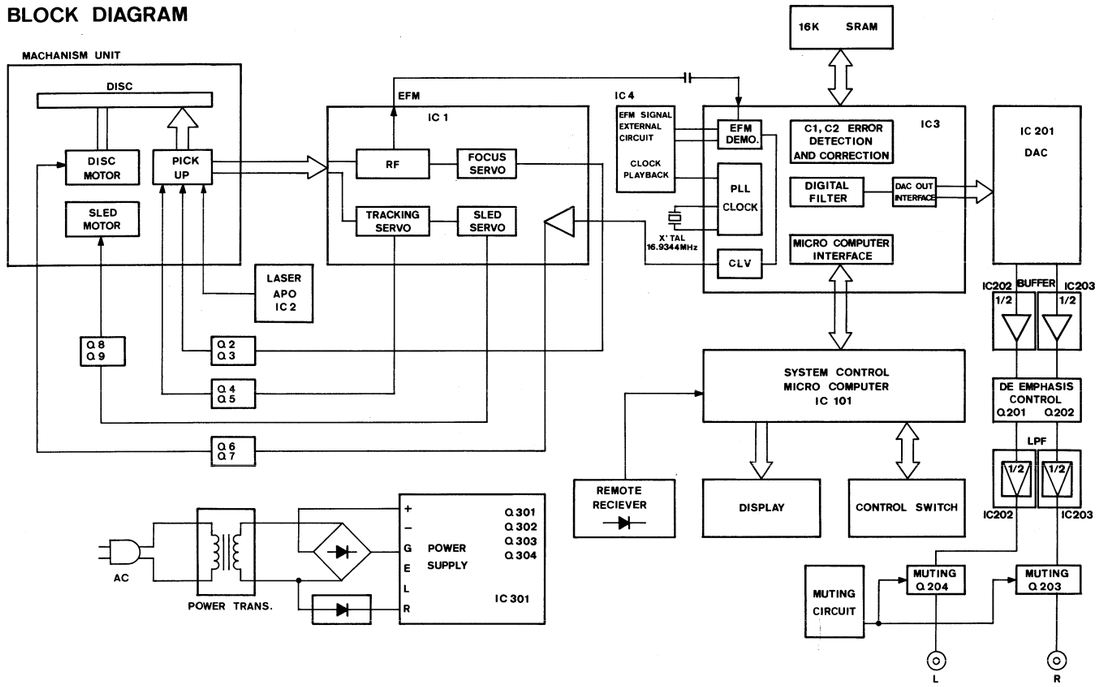
YM 7121B (Signal Processor & Controller)

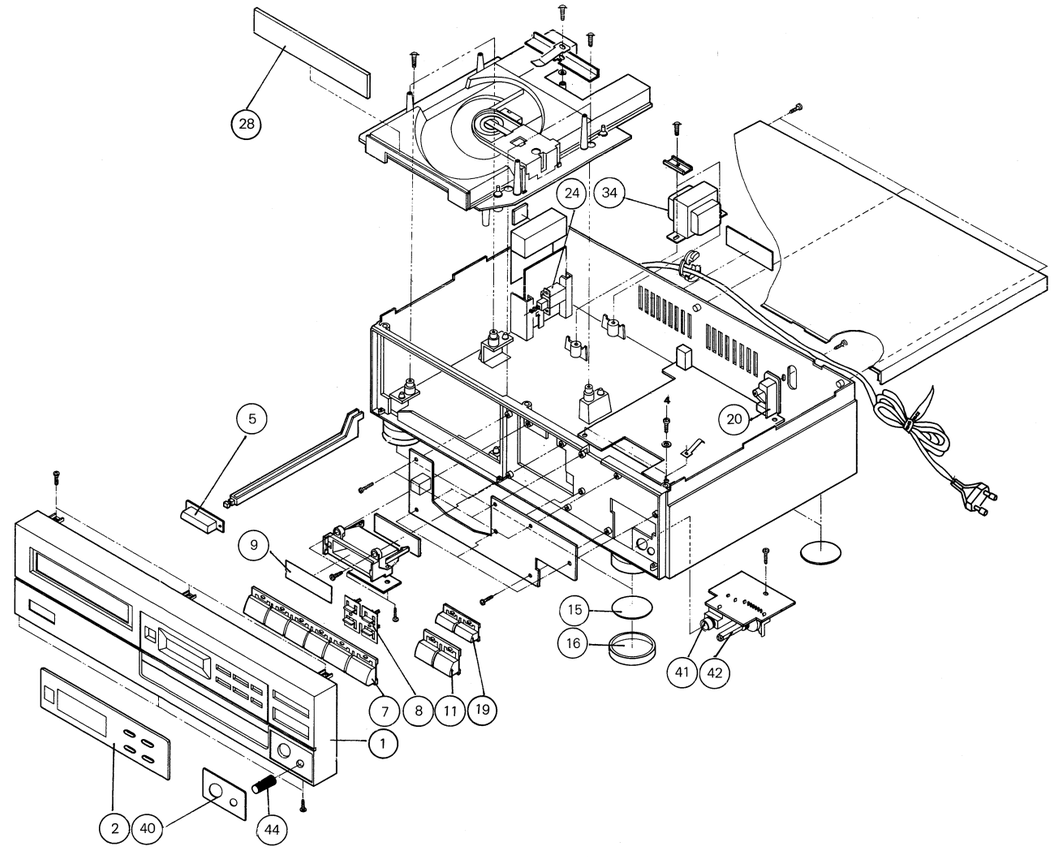


I : Input termina
O : Output termina
+ : Pull-up, - : Pull-down
Δ : Open-drain



BLOCK DIAGRAM



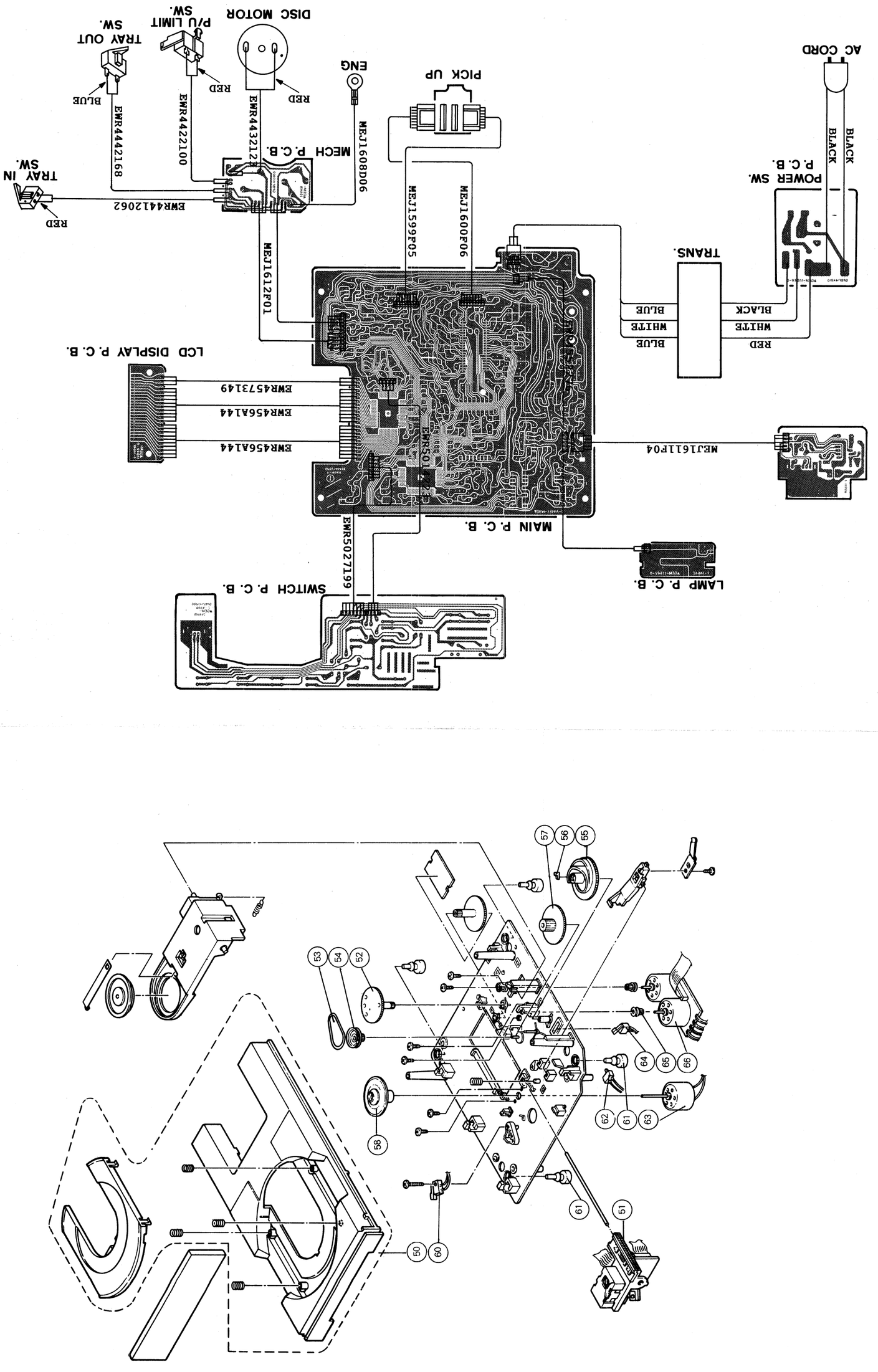


Ersatzteile · Replacement parts · Pièces détachées · CD 1010

Pos.	Art.-Nr.	Bezeichnung
1	286 866	Frontblende
2	286 867	Fenster
5	286 868	Knopf Power
7	286 869	Taste
8	286 870	Knopf Select
11	286 872	Knopf Seurch
15	286 873	Fußplatte
16	286 874	Fußring
19	286 875	Knopf Programm
20	286 821	Cinchbuchsen
24	286 820	Schalter
28	286 877	Abdeckung
34	286 878	Netztrafo
35	237 548	Kabeldurchführung
38	286 879	Gehäuseblech
39	232 996	Netzkabel
40	286 881	Kopfhörerblende
41	286 848	Kopfhörerbuchse
42	286 847	Steller 50 KA X 2
44	286 880	Drehknopf
		Mechanik
50	286 850	Schublade
51	286 851	Pick up
52	286 852	Zahnrad
53	286 853	Riemen
54	286 854	Antriebsrad
55	286 855	Kurvenrad
56	286 856	Gummitülle
57	286 857	Zahnrad
58	286 858	Plattenteller
60	286 859	Schalter
61	286 860	Gummidämpfer
62	286 861	Schalter
63	286 864	Moter (Spindle)
64	286 859	Schalter
65	286 863	Antriebsrolle
66	286 865	Motor
80	286 882	Faltschachtel
81	286 883	Styroporeinlage
82	286 679	RC 101 Fernbedienung
	286 998	Bedienungsanleitung CD 1010
		Grundplatte
IC 1	286 837	IC XC 488 AO
IC 2	286 838	IC BA 10358
IC 3	286 839	IC YM 7121 B
IC 4	286 957	IC NJM 2060 S
IC 101	286 840	IC UPD 75306 GF

Pos.	Art.-Nr.	Bezeichnung
IC 201	286 817	IC LC 7881
IC 202	286 841	IC M 4558 S
IC 203	286 841	IC M 4558 S
IC 301	286 842	IC AN 78 N 05
Q 2	269 095	Transistor 2 SC 2060 Q
Q 3	281 504	Transistor 2 SA 934 R
Q 304	281 504	Transistor 2 SA 934 R
Q 4	275 261	Transistor 2 SC 2001 L
Q 6	275 261	Transistor 2 SC 2001 L
Q 9	275 261	Transistor 2 SC 2001 L
Q 102	275 261	Transistor 2 SC 2001 L
Q 302	275 261	Transistor 2 SC 2001 L
Q 1	275 260	Transistor 2 SC 945 P
Q 12	275 260	Transistor 2 SC 945 P
Q 101	275 260	Transistor 2 SC 945 P
Q 201	275 260	Transistor 2 SC 945 P
Q 5	275 200	Transistor 2 SA 952 K
Q 7	275 200	Transistor 2 SA 952 K
Q 8	275 200	Transistor 2 SA 952 K
Q 10	275 200	Transistor 2 SA 952 K
Q 103	275 200	Transistor 2 SA 952 K
Q 11	263 142	Transistor 2 SA 733 Q
Q 13	263 142	Transistor 2 SA 733 Q
Q 301	263 142	Transistor 2 SA 733 Q
Q 305	263 142	Transistor 2 SA 733 Q
D 1	281 494	Diode 1 SS 133 HV
D 2	281 494	Diode 1 SS 133 HV
D 101	281 494	Diode 1 SS 133 HV
D 102	281 494	Diode 1 SS 133 HV
D 301	286 782	Diode W 005 H
DZ 301	283 552	Diode DZ 5,6
DZ 302	283 553	Diode DZ 7,5
DZ 303	283 553	Diode DZ 7,5
DZ 304	282 062	Diode DZ 9,1 BM
DZ 305	282 062	Diode DZ 9,1 BM
CF 1	283 109	Quartz 16,9344 MHz
CF 101	281 411	Quartz 4 MHz
LCD	286 843	Display
LP 301	286 844	Lampe 9 V
		Volume/Tastenplatte
S 101 bis S 114	286 819	Schalter
	286 819	Schalter
	286 845	IR-Empfänger
IC 501	286 846	IC UPD 4560
VR 501	286 847	Steller 50 KA X 2

Änderungen vorbehalten! Subject to change! Sous réserve de modification!


AC CORD
BLACK
BLACK
POWER SW.
P. C. B.
TRANS.
BLUE
WHITE
BLUE
RED
WHITE
BLACK
PICK UP
ENG
DISC MOTOR
P/U LIMIT SW.
TRAY OUT SW.
TRAY IN SW.
MECH P. C. B.
MEJ1608D06
MEJ1599F05
MEJ1600F06
MEJ1612F01
EWR4432128
EWR4422100
EWR4442168
EWR4412062
RED
BLUE
RED
RED
LCD DISPLAY P. C. B.
EWR45731A9
EWR4567A144
EWR4567A144
MEJ1611F04
MAIN P. C. B.
LAMP P. C. B.
EWR5027199
SWITCH P. C. B.

57
56
55
53
54
52
64
65
66
62
61
63
58
61
51
50
60